



Nutrient Criteria Development in Alaska

Alaska Department of Environmental Conservation

Water Quality Standards, Assessment and Restoration Program

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What to Expect

- Set the Stage
- What Has Been Done in Alaska
- Current Status
- What's Next

Alaska's Unique Challenges

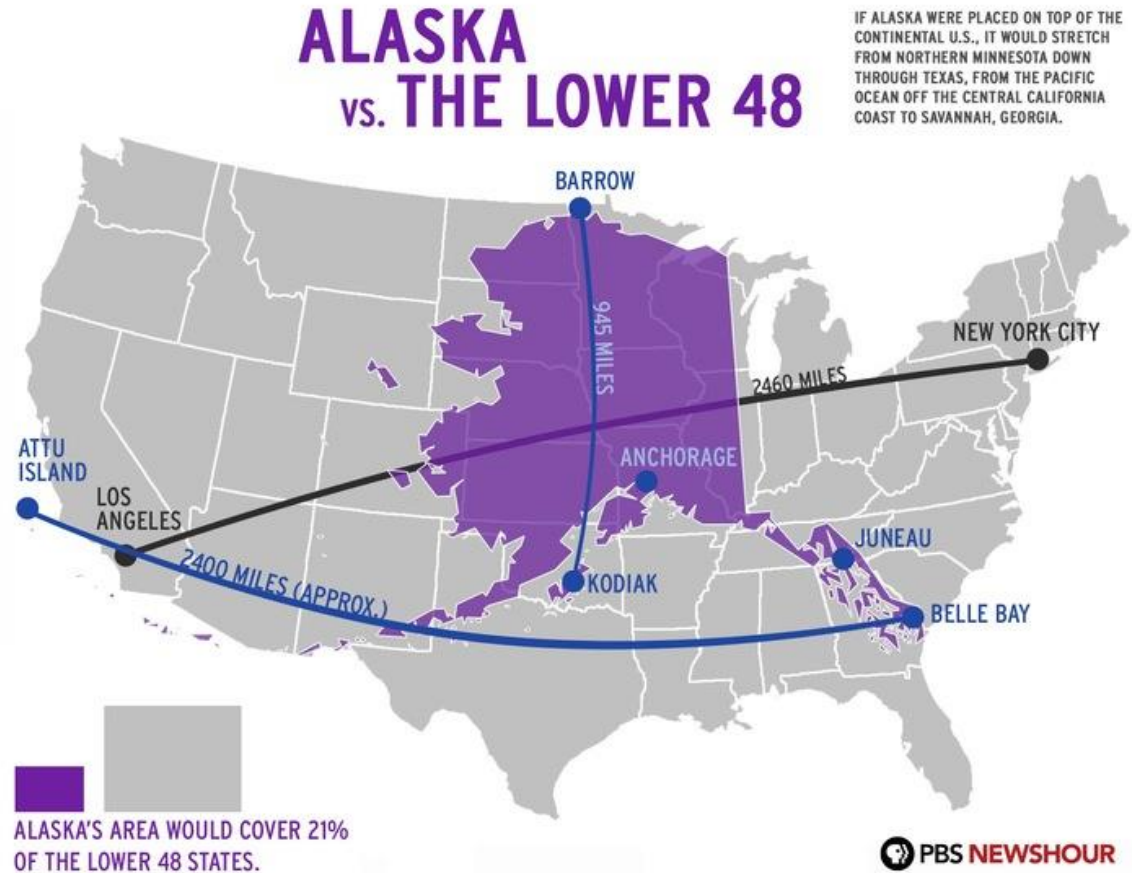
Lakes: 1-3 million larger than 20 acres

Rivers and Streams: More than 3,000 measuring 7-10 million miles

Estuaries: Shoreline is between 30-45,000 miles long

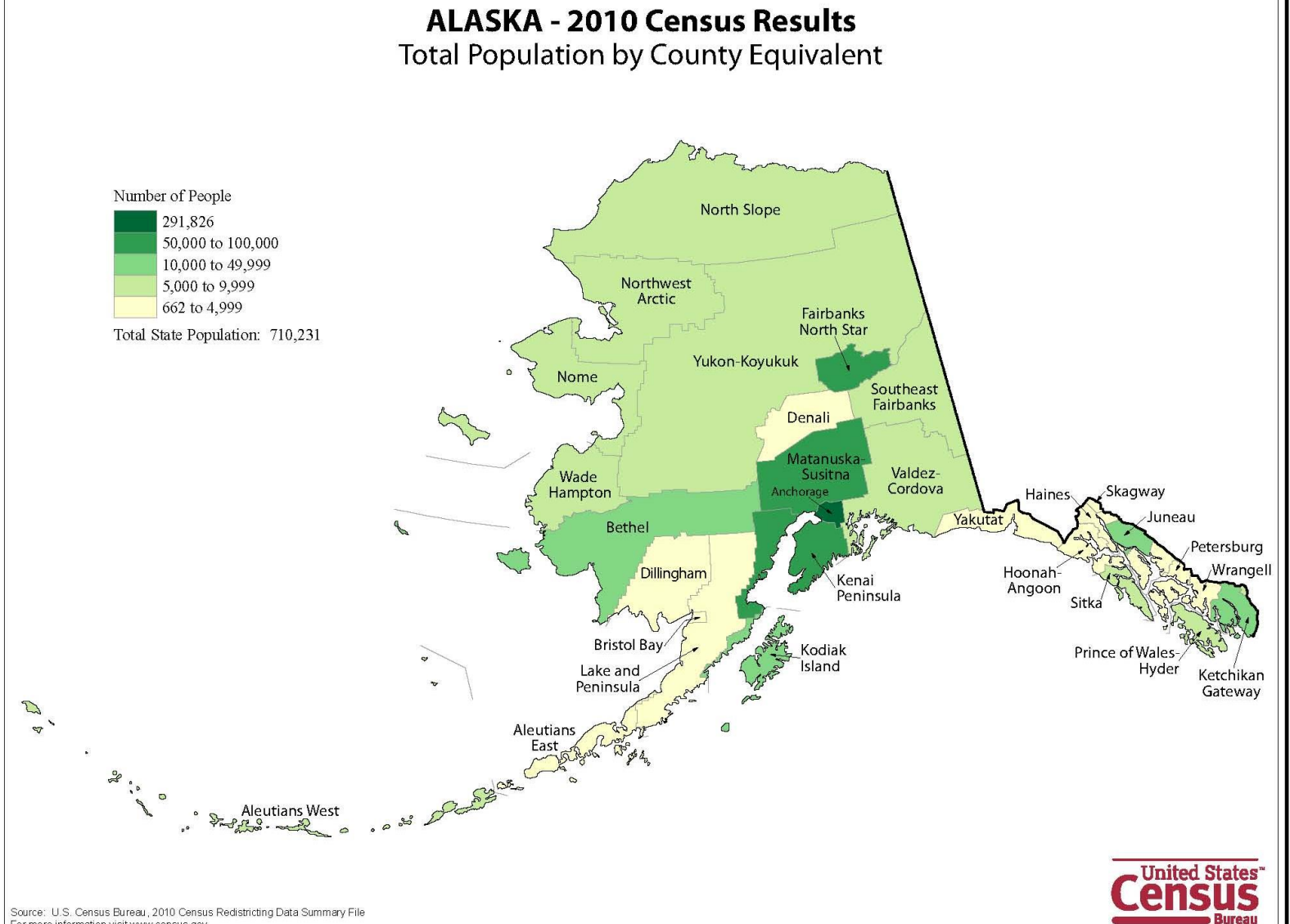
Wetlands: Approximately 40% of land area is categorized as wetlands, due to permafrost

Alaska IS Big!

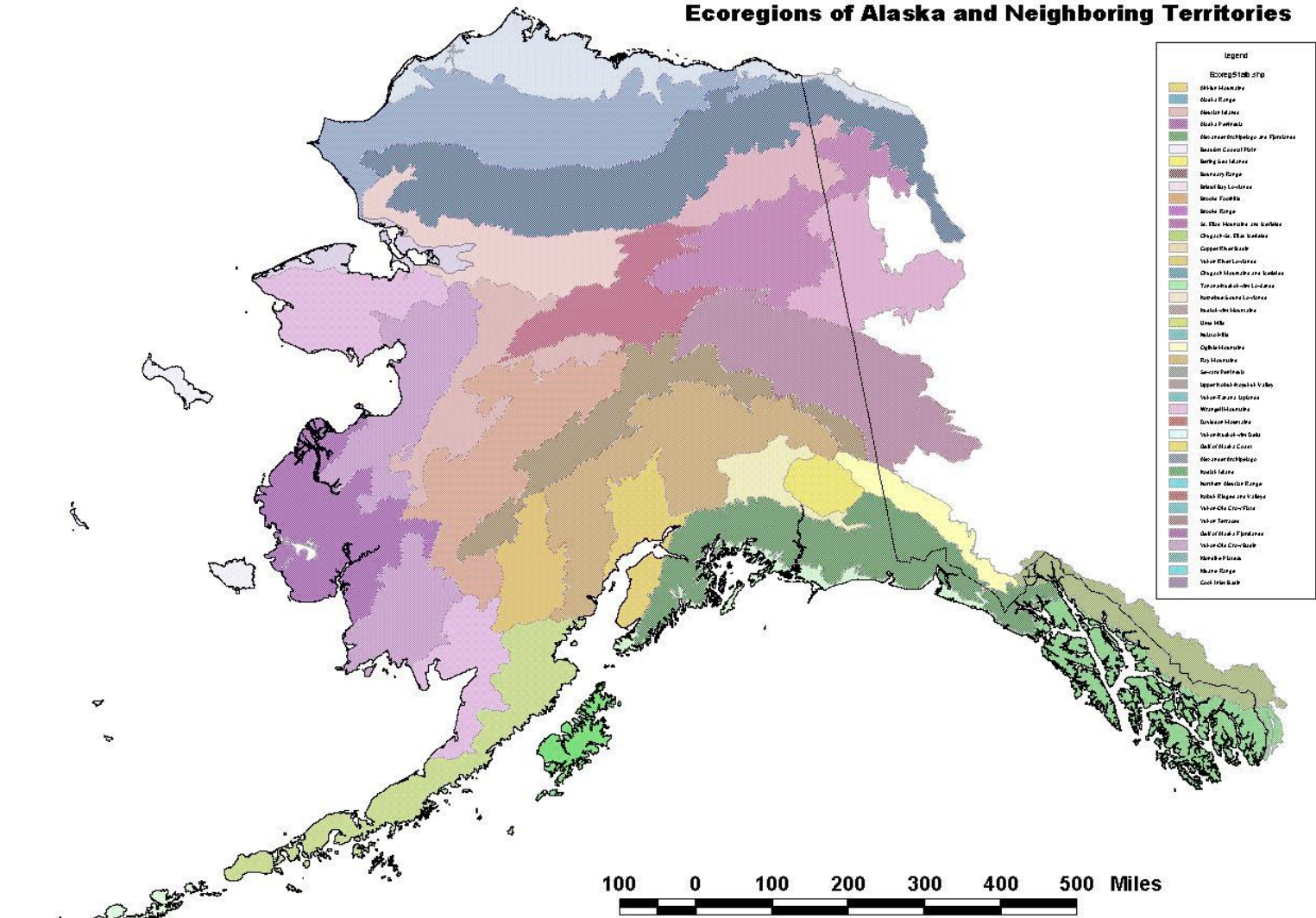


Alaska's Challenges cont...

- Very few urban areas
- Very little agriculture
- Locally affected areas
- Lots of water
- Only 0.1% of all AK waters have been sampled.



32 Ecoregions



Plan Development

State nutrient criteria development plans are a tool to monitor the progress and resource needs to complete criteria development

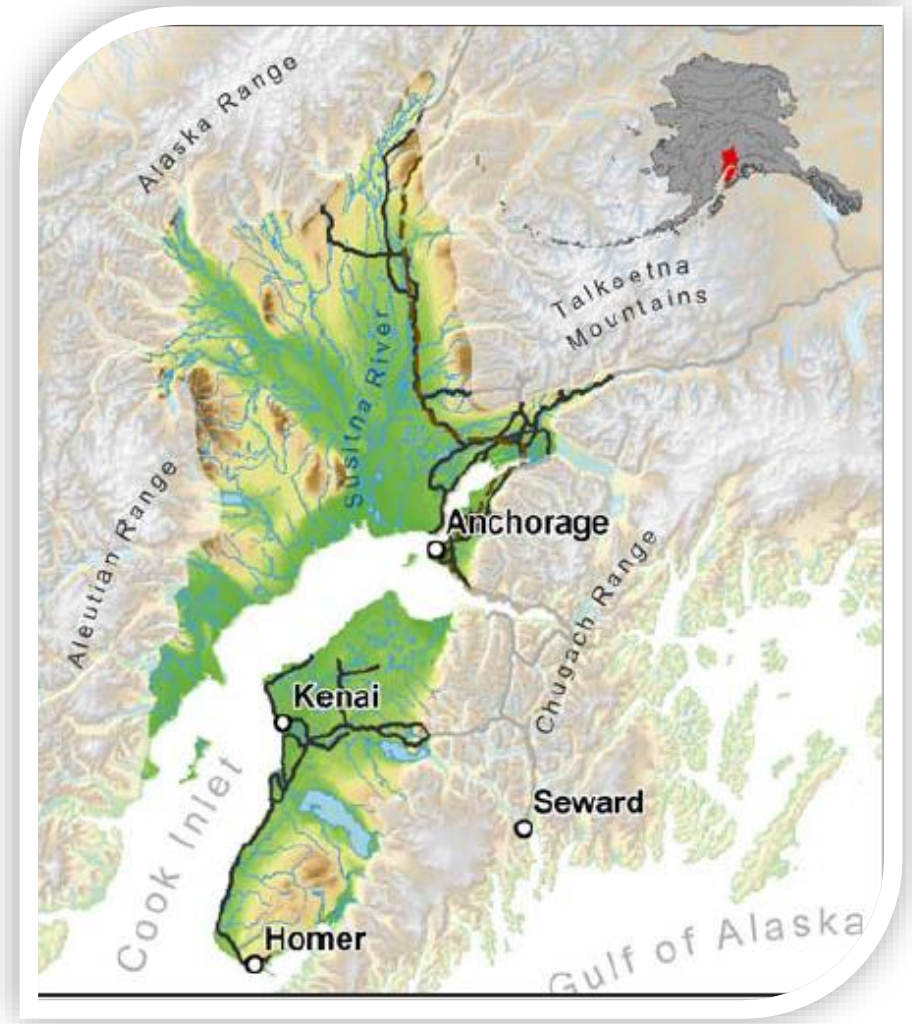
- Alaska submitted Numeric Nutrient Criteria Development Plan to EPA (approved 2005)
- Area of investigation: Cook Inlet ecoregion in southcentral Alaska
- Development of Alaska Technical Advisory Group (ATAG) in June 2005
 - University of Alaska Fairbanks (UAF)
 - Matanuska-Susitna Borough
 - USGS
 - ADEC Nonpoint Source

Regional Study

Area considered for
feasibility of a
numeric nutrient
criteria

Cook Inlet Ecoregion

- Over half of the state population
- Only region in the state that has measurable agricultural activity
- Logistic and resource considerations



Results

- This study is the beginning, but not sufficient to develop numeric nutrient criteria
- Seasonality has not been addressed
- All sites have only been sampled once and without vertical sampling or areal coverage

Current Status

- Narrative nutrient criteria adopted in AK WQS (2003) 18AAC70.020(b) (11) and (23)
- Address nutrients on a **permit by permit** basis when identified during a reasonable potential analysis
- Nutrient Criteria are included in the Triennial Review as an issue for continued monitoring

What Next?

- Collect baseline data on a wider geographic scale on an opportunistic basis
- Collect more information on the potential for nutrient impacts to aquatic life when conducting watershed assessments and similar studies
- Continue to partner with other agencies to help fill in data gaps

Questions?

Thank you.

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